

SECTION 3 DESCRIPTION OF EXECUTABLES

3.1 DSRS EXECUTABLES. Table 3-I lists the six executables that exist for the DSRS, a description of each executable, and reference to the section where more information about the executable can be found.

Table 3-I. Executables Existing for the DSRS

Executable	Description	Section
DSRS	Allows the user to execute the DSRS User tool in a MS-Windows environment.	3.5
DSRS	Allows the user to execute the DSRS User tool in a X/Motif, environment.	3.6
DSRSLIB	Allows the DSRS Librarian tool to be executed in a MS-Windows environment.	3.7
pc_server or pc_server.sol23	Allows DSRS Catalog and Authentication Requests such as logging in.	3.8
lib_server or lib_server.sol23	Allow Supervisor/Librarian DSRS Authentication Requests such as logging in.	3.9
dsrs_server or dsrs_server.sol23	Allow the DSRS to process remote extract requests and transfer RA files to DSRS or foreign clients.	3.10

3.2 GENERAL ACCESS REQUIREMENTS. The following are general requirements necessary to access the DSRS executables:

- a. A valid DSRS account.
- b. The ORACLE RDBMS must be accessible to the executables. Refer to Section 2.4.1 to start the ORACLE RDBMS.

Specific requirements for each executable are addressed in the appropriate sections identified in Table 3-I.

3.3 SECURITY. Refer to Section 2.6 for details on security when accessing the different executables.

3.4 ERROR MESSAGES. If a database error occurs in any of the DSRS executables, the ORACLE error number is displayed. Consult the *ORACLE7 Server Messages and Codes Manual* for error message meanings and corrective actions.

3.5 DSRS EXECUTABLE. This section describes the detailed information needed to execute DSRS.

3.5.1 Access Requirements. The following are required to access DSRS.

- a. **Terminal Types.** PC/DOS with MS-Windows User Interface.
- b. **Accounts.** The user must have a valid DSRS account.
- c. **Additional Requirements.** The ORACLE_SID to be used by the DSRS must be defined in the **oratab** file and in the **/dsrscm/bin/pc_server** or **/dsrscm/bin/pc_server.sol23** files.

The pc_server executable must be configured to allow connections to the database.

On SunOS the file **/etc/services** must contain the following entry:

pc_server 1604/tcp #pc_server for DSRS

On SunOS the file **/etc/inetd.conf** must contain the following entry:

pc_server stream tcp nowait root /dsrscm/bin/pc_server

On Solaris the services database file must have the port **1604** defined and named **pc_server**.

On Solaris the file **/etc/inetd.conf** must contain the following entry:

pc_server stream tcp nowait root /dsrscm/bin/pc_server.sol23

Network connections will require appropriate Transmission Control Protocol/Internet Protocol (TCP/IP) networking software installed on the PC.

The directory **/var/adm/dsrs** defined in the **/dsrscm/bin/pc_server** or **/dsrscm/bin/pc_server.sol23** as the environment variable of \$DSRS_LIBRARIAN must be created with the file protection of 777.

3.5.2 Messages and Diagnostics. Table 3-II lists potential problems that may occur when executing **DSRS**.

Table 3-II. DSRS Problems

Problem	Description
<i>Unable to login. Contact DSRS Staff for assistance.</i>	Verify the port executes the pc_server or pc_server.sol23 files in /dsrscm/bin. Verify the pc_server or pc_server.sol23 files are configured properly and point to a valid ORACLE_SID. Verify the ORACLE database is available.
<i>Unable to open the pc_server.log.</i>	You do not have the proper protection set for the file /var/adm/dsrs/pc_server.log.
<i>Server refused connection. Contact DSRS Staff for assistance.</i>	The port has not been created on the server.

3.5.3 Outputs. This section lists the output files generated by **DSRS**.

- a. **Sessions.** If the user saves their session, then a file is created that contains the current session information.
- b. **File Copy Extractions.** If the user performs a file copy extraction, then the RA files are downloaded to the current working directory. These files may include source code, RA documentation, and test drivers. Filenames are determined by the RA ID and an extension indicative of the type of RA file. For example, a file with the extension **.abs** contains the abstract for the RA identified in the filename.
- c. **Hard Copy and Tape Copy Extractions.** If the user requests a hard copy or tape copy extraction, then a file is created in the **/var/adm/dsrs** directory. This file includes information about the requested extraction with a file extension of **.ext**. Refer to Section 2.4.2.4 for detailed information on **.ext** files.
- d. **Additional Files.** In some cases, if failures occur during extractions using FTP, directories containing RA files may be left in the **/tmp** directory. The **/var/adm/dsrs/pc_server.log** file contains messages generated by the pc_server and pc_server.sol23 executables.

3.6 DSRX X/MOTIF EXECUTABLE. This section describes the detailed information needed to execute the X/Motif-based **DSRS**.

3.6.1 Access Requirements. The following are required to access **DSRS** executable.

- a. **Terminal Types.** Table 3-IV contains the terminal type that supports the **DSRS** application.

Table 3-III. DSRX Terminal Types

Terminal Type	Uses
xterm	For running X/Motif-based DSRX on the console of a SUN Workstation.

- b. **Accounts.** The user must be logged into a valid account on the DSRX platform. The user must have a valid DSRX account.
- c. **Additional Requirements.** **DSRS** requires UNIX X/Motif-based terminal type setting.

The shell variable **TERM** must be defined as a supported terminal type.

To invoke the DSRX, enter the command:

dsrs

The shell variable **DISPLAY** must be defined as the IP address of the display device. For example:

setenv DISPLAY [IP address]:0

Motif must be running X11R5 which is installed during the ICS OSF Motif installation.

3.6.2 Messages and Diagnostics. Table 3-IV lists potential problems that may occur when executing **DSRS**.

Table 3-IV. DSRS Problems

Problem	Description
<i>Unable to open the pc_server.log.</i>	You do not have the proper protection set for the file /var/adm/dsrs/pc_server.log .
<i>Unexpected colors or unusual looking screens are displayed.</i>	An .Xdefaults file must be created in the user's directory.
<i>Unable to allocate fonts or colors.</i>	An .Xdefaults file must be created with appropriate fonts and colors supported by the Xserver.
<i>Unknown terminal type.</i>	You must enter a supported terminal type.
<i>Warning: Couldn't open file xxx.uid-MrmNOT_FOUND.</i>	The variable UIDPATH has not been properly defined.

3.6.3 Outputs. This section lists the output files generated by **DSRS**.

- a. **Sessions.** If the user saves their session, then a file is created that contains the current session information.
- b. **File Copy Extractions.** If the user performs a file copy extraction, then the RA files are downloaded to the currently working directory. These files may include source code, RA documentation, and test drivers. Filenames are determined by the RA ID and an extension indicative of the type of RA file. For example, a file with the extension **.abs** contains the abstract for the RA identified in the filename.
- c. **Hard Copy and Tape Copy Extraction Requests.** If a user requests a hard copy or tape copy extraction, then a file is created in the **/var/adm/dsrs** directory. This file includes information about the requested extraction with a file extension of **.ext**. Refer to Section 2.4.2.4 for detailed information on **.ext** files.
- d. **Additional Files.** In some cases, if failures occur during extractions using FTP, directories containing RA files may be left in the **/tmp** directory. The **/var/adm/dsrs/pc_server.log** file contains messages generated by the **pc_server** and **pc_server.sol23** executables.

3.7 DSRSLIB EXECUTABLE. This section describes the detailed information needed to execute the **DSRSLIB**, the Librarian front-end of the DSRS.

3.7.1 Access Requirements. The following are required to access the **DSRSLIB** executable.

- a. **Terminal Types.** PC/DOS with MS-Windows User Interface.
- b. **Accounts.** The user must have a valid DSRS Librarian or Supervisor account.
- c. **Additional Requirements.** Oracle SQL*Net TCP/IP for Windows must be properly installed and configured on the PC.

ODBC Version 7 drivers must be properly installed and configured on the PC.

The ORACLE_SID to be used by the DSRS Librarian Tool must be defined in the **oratab** file and in the **/dsrscm/bin/lib_server** or **/dsrscm/bin/lib_server.sol23** files.

The lib_server must be configured to allow connections to the database.

On SunOS the file **/etc/services** must contain the following entry:

lib_server 1610/tcp #lib_server for DSRS

On SunOS the file **/etc/inetd.conf** must contain the following entry:

lib_server stream tcp nowait root /dsrscm/bin/lib_server

On Solaris the services database file must have the port **1610** defined and name **lib_server**.

On Solaris the file **/etc/inetd.conf** must contain the following entry:

lib_server stream tcp nowait root /dsrscm/bin/lib_server.sol23

The directory **/var/adm/dsrs** defined in the **/dsrscm/bin/lib_server** or **/dsrscm/bin/lib_server.sol23** as the environment variable of \$DSRS_LIBRARIAN must be created with the file protection of 777.

3.7.2 Messages and Diagnostics. Table 3-V lists potential problems that may occur when executing **DSRSLIB**.

Table 3-V. DSRSLIB Problems

Problem	Description
Runtime Error 202	An error occurred with the connection to the server. Reboot your PC and login to the DSRSLIBrarian.
Windows socket Error	An error occurred with the connection to the server. Reboot your PC and login to the DSRSLIBrarian.

3.7.3 Outputs. This section describes the output file generated by **DSRSLIB**.

Export. If the Librarian performs an RA Catalog Export, then an export file is generated with the filename specified by the Librarian. Unless otherwise specified, the file is saved to the current working directory.

3.8 PC SERVER EXECUTABLE. This section describes the detailed information on the `pc_server` and `pc_server.sol23` executables.

3.8.1 Access Requirements. The following are required to access the `PC_SERVER`.

- a. **Terminal Types.** This executable is not accessible through interactive connections.
- b. **Accounts.** `pc_server` processes are owned by the root user, as specified by the `/etc/inetd.conf` file.
- c. **Additional Requirements.** The **ORACLE_SID** to be used by the `pc_server` must be defined in the `/etc/oratab` file and in the `/usr/local/etc/pc_server` file.

3.8.2 Messages and Diagnostics. Table 3-VI lists potential problems that may occur when executing `pc_server`.

Table 3-VI. PC_SERVER Problems

Problem	Description
<i>Unexpected colors or unusual looking screens are displayed.</i>	An .Xdefaults file must be created in the user's directory.
<i>Unable to allocate fonts or colors.</i>	An .Xdefaults file must be created with appropriate fonts and colors supported by the Xserver.

3.8.3 **Outputs.** This section describes the output file generated by **DSRS_IMPORT**.

- a. **pc_server.log.** The file **/var/adm/dsrs/pc_server.log** contains the status of each transaction, errors, and warnings that occurred during the DSRS process. The file is stored in the directory specified in the **/usr/local/etc/pc_server** file.

3.9 **LIB SERVER EXECUTABLE.** This section describes the detailed information on the lib.server and lib_server.sol23 executables.

3.9.1 **Access Requirements.** The following are required to access the lib_server.

- a. **Terminal Types.** This executable is not accessible through interactive connections.
- b. **Accounts.** lib_server processes are owned by the root user, as specified by the **/etc/inetd.conf** file.
- c. **Additional Requirements.** The **ORACLE_SID** to be used by the lib_server must be defined in the **/etc/oratab** file and in the **/usr/local/etc/lib_server** file.

3.9.2 **Messages and Diagnostics.** Table 3-VII lists potential problems that may occur when executing lib_server.

Table 3-VII. LIB_SERVER Problems

Problem	Description
<i>Unable to login. Contact DSRS Staff for assistance.</i>	Verify the port executes the pc_server or pc_server.sol23 files in /dsrscm/bin. Verify the pc_server or pc_server.sol23 files are configured properly and point to a valid ORACLE_SID. Verify the ORACLE database is available.
<i>Unable to open the lib_server.log.</i>	You do not have the proper protection set for the file /var/adm/dsrs/lib_server.log .
<i>Server refused connection. Contact DSRS Staff for assistance.</i>	The port has not been created on the server.

3.9.3 **Outputs.** This section describes the output file generated by lib_server.

- a. **lib_server.log.** The file **/var/adm/dsrs/lib_server.log** contains the status of each login transaction, errors, and warnings that occurred during the lib_server process. The file is stored in the directory specified in the **/usr/local/etc/lib_server** file.

3.10 DSRS_SERVER EXECUTABLE. This section provides detailed information on the **DSRS_SERVER** executable.

3.10.1 Access Requirements. The following are required to access the **DSRS_SERVER**.

- a. **Terminal Types.** This executable is not accessible through interactive connections.
- b. **Accounts.** **DSRS_SERVER** processes are owned by the root user, as specified by the **/etc/inetd.conf** file.
- c. **Additional Requirements.** The **ORACLE_SID** to be used by the **DSRS_SERVER** must be defined in the **oratab** file and in the **/dsrscm/bin/dsrs_server** or **/dsrscm/bin/dsrs_server.sol23** file. On SunOS the file **/etc/services** must have the line included:

iop_srv 1600/tcp # Interop Server for DSRS.

On SunOS the **/etc/inetd.conf** file must have the line included:

iop_srv stream tcp nowait root /dsrscm/bin/dsrs_server dsrs_server

On Solaris the services database file must have the port **1600** defined and named **iop_srv**.

On Solaris the **/etc/inetd.conf** must have the line included:

iop_srv stream tcp nowait root /dsrscm/bin/dsrs_server.sol23 dsrs_server

3.10.2 Messages and Diagnostics. Table 3-VIII lists potential problems that may occur when **DSRS_SERVER** is executed.

Table 3-VIII. DSRS_SERVER Problems

Problem	Description
<i>The DSRS_SERVER cannot connect to the database when a remote request (extraction) occurs.</i>	Either, 1) The dsrs_server command script specifies an incorrect ORACLE_SID , or 2) The database, specified by the ORACLE_SID , is down or corrupted, or 3) The ORACLE_SID is not defined in the /etc/oratab file, or 4) The variable ORACLE_HOME has not been properly defined.

Problem	Description
<i>Invalid notification message.</i>	The remote site is not using a compatible version of the notification message.
<i>Site not registered.</i>	The site initiating the request does not exist in the local site's list of remote sites.
<i>Remote request denied. Insufficient privileges.</i>	The site initiating the request does not have extract privileges to a group containing the RA.

The following errors indicate that there is a problem connecting to the database (refer to the description in Table 3-VIII for a possible description of the problem):

- a. *Unable to authenticate request.*
- b. *Unable to retrieve asset filenames.*
- c. *Unable to add to use log.*
- d. *Unable to delete use log entry.*

3.10.3 **Outputs.** This section lists the output files generated by **DSRS_SERVER**.

- a. **Server Log.** This executable writes notification and error messages to the **dsrs_server.log** when a remote extraction requested is processed. This file is stored in the **/var/adm/dsrs** directory.
- b. **Hard Copy and Tape Copy Extraction Requests.** If a remote user requests a hard copy or tape copy extraction, then a file is created in the **/var/adm/dsrs** directory. This file includes information about the requested extraction with a file extension of **.EXT**. Refer to Section 2.4.2.4 for detailed information on **.EXT** files.